MIRROR LAKE

LAKE BIOASSESSMENTS

JULY 2015

Greetings Mirror Lake Residents,

Please find the latest bioassessment report for your lake below. Our next lake inspection is scheduled for **August 18th, 2015**, weather permitting. Key highlights of this update include:

- Hydrilla status
- Submersed aquatic vegetation (SAV)
- Emergent vegetation
- Recommendations for you and your waterbody

Bioassessment

On **July 15th, 2015**, SCLMP personnel, Joey Cordell and Sophia Pengra, surveyed the aquatic plants in **Mirror Lake.**

A patch of hydrilla was found near around the hydrilla. This patch will be treated in the during the next herbicide application (third week of August). Additionally, bladderwort impeding access in the south and north lobes were treated on August 6th, 2015. We will closely monitor the hydrilla and bladderwort treatments for effectiveness.

Photo: Mixture of eelgrass (native) and hydrilla (invasive)

Seven species of native submersed aquatic vegetation (SAV) were found during the inspection. These native species included: lemon bacopa to 2 feet, baby's tears to 1 foot, southern naiad to 2 feet, eelgrass to 6 feet, and 3 species of bladderwort to 7 feet. Bladderwort was the dominant species of SAV found in Mirror Lake.

Native SAV plays an important role within Mirror Lake by providing wildlife habitat, reducing nutrient levels, and competing with hydrilla for space.

Photo: Bladderwort (native)

Photo: Close-up of lemon bacopa (native)

Native emergent vegetation found during the survey included: canna, buttonbush, swamp lily, primrose willow, american lotus, yellow cow lily, fragrant water lily, banana lily, pickerelweed, duck potato, burhead sedge, and cattail. American lotus has spread to the south end of the lake.

Invasive emergent vegetation included: alligator weed, torpedo grass, and creeping oxeye.

The water elevation at the time of inspection was 58.13 feet above sea level. The secchi reading (measurement for water clarity) was 13.8 feet in a depth of 15.1 feet. No grass carp fish were observed during this inspection.

Recommendations for your waterbody:

1 Work together with other lakefront owners. Have *at least* one annual lake association meeting, invite guest speakers (such as county or state biologists), and discuss lake specific issues, especially nutrients/lake management recommendations. SCLMP staff will be glad to present our findings from this and other surveys. Continue to increase native aquatic plantings along shorelines (such as pickerelweed, duck potato, and canna).

2 Consider increasing street sweeping services during times of peak leaf fall to ensure that this debris does not enter waterways. Leaf debris contains high levels of phosphorous that can negatively impact your lakes.

3 Increase educational outreach programs, i.e. Shoreline Restoration Workshops, Florida Yards and Neighborhoods (FYN), Lake Management Video mail-outs, and reduction of personal pollution by: decreasing fertilizer usage, using only phosphorous free and slow release nitrogen types of fertilizers, keeping a functional shoreline with beneficial native aquatic plants, and by keeping grass clippings out of your lake and the stormdrains that lead to the lake. All of these activities aid in protecting your lake! Contact Seminole County Lake Management Program (407) 665-2439 for more information regarding the free educational programs available.

4 Help spread the word! Obtain email addresses from neighbors not currently on the distribution list so that these reports can be shared with everyone. Valuable information is contained within these assessments.

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SEMINOLE COUNTY WATERSHED MANAGEMENT DIVISION

Aquatic Plant of the Month

Bladderwort (*Utricularia* species) : A Florida Native

14 Species of Bladderwort exist in Florida, all of which are native.

Identification

Bladderworts are annual or perennial plants which lack roots and are free floating. The entire free-floating plant is typically 8 inches tall with yellow, purple, or white flowers that rise above the water's surface. Underwater, the plant has fleshy, inflated stems that are filled with air and allow it to float. The leaves are forked and often have a very fine capillary appearance.

This unique carnivorous plant utilizes small oval "bladders" on its underwater leaves to trap and digest small aquatic organisms. Hairs at the edge of the bladder act as a trigger, causing the trap to spring open and draw in water (and organisms) when contacted.

Wildlife Value

Common bladderwort is used by several insects, waterfowl, and mammals as a food source. The stems also provide shelter and a place for wildlife to lay eggs.

Native submersed aquatic plants provide habitat for several micro- and macroinvertebrate species, which in turn provide a source of food for fish and other aquatic wildlife species including reptiles, amphibians, and waterfowl. Once aquatic plants die, their decomposing parts provide food (referred to as "detritus") for several aquatic invertebrates.

Additionally, native submersed plants play an important role in the aquatic ecosystem by reducing nutrients within the waterbody and by competing with invasive species for space.

Control

Although native, bladderwort may impede recreational access. For questions concerning control of bladderwort or to apply for a free aquatic plant removal permit, please contact your state agency, the Florida Fish and Wildlife Conservation Commission, online at: http://myfwc.com/license/aquatic-plants or by calling 863-534-7074.

SEMINOLE COUNTY

Sources:

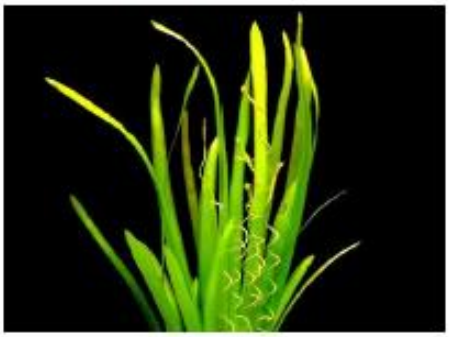
Texas A&M AgriLife Extension. (2015). *Bladderwort*. Retrieved from http://aquaplant.tamu.edu/plant-identification/alphabetical-index/bladderwort/

Stritch, L. (n.d.). *Common Bladderwort*. U.S. Forest Service. Retrieved from http://www.fs.fed.us/wildflowers/plant-of-the-week/utricularia_macrorhiza.shtml

SEMINOLE COUNTY WATERSHED MANAGEMENT DIVISION

Aquatic Plant of the Month

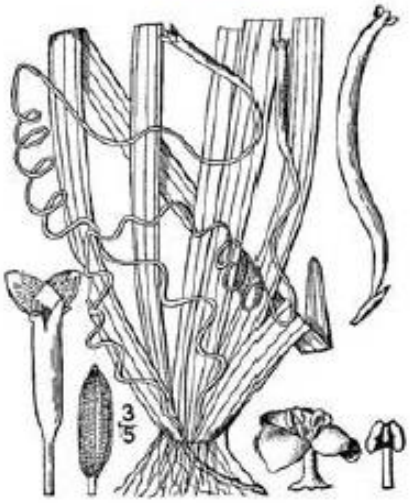
Eelgrass (*Vallisneria americana*): A Florida Native



Eelgrass, also known as tapegrass, is native to the state of Florida.

Identification

Eelgrass is a submersed, perennial plant that can be found throughout the state in both still and flowing waters. Eelgrass leaves often resemble tape or ribbon. They are about an inch wide with raised veins and rounded tips. The leaves can grow several feet in length and their upper parts can often be found floating along the water surface. Eelgrass produces both male and female flowers, however, the small, white female flowers are most often seen, as their long, corkscrew-like flower stalks reach the surface of the water.



Wildlife Value

Eelgrass is an important food source for the endangered West Indian manatee (*Trichechus manatus*) and various species of waterfowl. Additionally, eelgrass provides important habitat, protection, and nursery grounds for fish.

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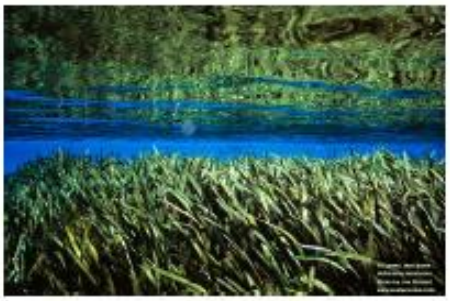
Additionally, native submersed plants play an important role in the aquatic ecosystem by reducing nutrients within the waterbody and by competing with invasive species for space.



Control

Although native, eelgrass may impede recreational access. For questions concerning control of eelgrass or to apply for a free aquatic plant removal permit, please contact your state agency, the Florida Fish and Wildlife Conservation Commission, online at: http://myfwc.com/license/aquatic-plants or by calling 407-858-6170.

SEMINOLE COUNTY
FLORIDA'S NATURAL CHOICE

Sources:

NOAA. (2012, October 22). *Eelgrass-Habitat of the Month*. Retrieved from http://www.habitat.noaa.gov/abouthabitat/eelgrass.html

UF/IFAS. (2014). *Eel-grass, tape-grass*. Retrieved from http://plants.ifas.ufl.edu/node/465

UF/IFAS. (2014). *Algae*. Retrieved from http://plants.ifas.ufl.edu/manage/why-manage-plants/algae

Washington State Department of Ecology. (n.d.). *Vallisneria Americana*. Retrieved from http://www.ecy.wa.gov/programs/wq/plants/plantid2/descriptions/valame.html